Technical Appendix

About the Survey

The National Survey of Children's Health (NSCH) was fielded using the State and Local Area Integrated Telephone Survey (SLAITS) mechanism. SLAITS is conducted by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS). It uses the same large-scale random-digit-dial sampling frame as the CDC's National Immunization Survey.[6]

Approximately 1.9 million telephone numbers were randomly generated for inclusion in the NSCH. After eliminating numbers that were determined to be nonresidential or nonworking, the remaining numbers were called to identify households with children less than 18 years of age. From each household with children, one was randomly selected to be the focus of the interview.

The respondent was the parent or guardian in the household who was most knowledgeable about the health and health care of the children under 18 years of age. For 79 percent of the children, the respondent was the mother. Respondents for the remaining children were fathers (17 percent), grandparents (3 percent), or other relatives or guardians (1 percent). Surveys were conducted in English and Spanish. Overall, 5.9 percent of the interviews were completed in Spanish.

Data Collection

Data collection began on January 29, 2003 and ended on July 1, 2004, with interviews conducted from telephone centers in Chicago, Illinois; Las Vegas, Nevada; and Amherst, Massachusetts. A computer-assisted telephone interviewing system was used to collect the data. A total of 102,353 interviews were completed for the NSCH, with 87 percent of the interviews completed in 2003. The number of completed interviews varied by State, ranging from 1,848 in New Mexico to 2,241 in Louisiana and Ohio, with one exception: Only 1,483 interviews were completed in Utah. More than 2,000 interviews were completed in 25 States.

The cooperation rate, which is the proportion of interviews completed after a household was determined to include a child under age 18, was 68.8 percent. The national weighted response rate, which includes the cooperation rate as well as the resolution rate (the proportion of telephone numbers identified as residential or nonresidential) and the screening completion rate (the proportion of households successfully screened for children), was 55.3 percent.

Overall response rates ranged from 49.6 percent in New Jersey to 64.4 percent in South Dakota. Several efforts were made to increase response rates, including sending letters to households in advance to introduce the survey, toll-free numbers left on potential respondents' answering machines to allow them to call back, and small monetary incentives for those households with children who initially declined to participate.

Data Analysis

In order to produce the population-based estimates in this report, the data records for each interview were assigned a sampling weight. These weights are based on the probability of selection of each household telephone number within each State, with adjustments that compensate for households that have multiple telephone numbers, for households without telephones, and for nonresponse.

With data from the U.S. Bureau of the Census, the weights were also adjusted by age, sex, race, ethnicity, household size, and educational attainment of the most educated household member to provide a dataset that was more representative of each State's population of non-institutionalized children less than 18 years of age. Analyses were conducted using statistical software that accounts for the weights and the complex survey design. Responses of "don't know" and "refuse to answer" were counted as missing data.

Racial and ethnic groups are mutually exclusive; that is, data reported for White, Black, multiracial and children of other races do not include Hispanics, who may be of any race.

Accuracy of the Results

The data from the NSCH are subject to the usual variability associated with sample surveys. Small differences between survey estimates may be due to random survey error and not to true differences among children or across States.

The precision of the survey estimates is based on the sample size and the measure of interest. Estimates at the national level will be more precise than estimates at the State level. Estimates for all children will be more precise than estimates for subgroups of children (for example, children 0-5 years of age or children within the same race). For national estimates of the health and health care for all children, the maximum margin of error is 0.6 percent. For the State-level indicators for all children, the maximum margin of error is 3.0 percent.

Availability of the Data

Except for data suppressed to protect the confidentiality of the survey subjects, all data collected in the NSCH are available to the public on the NCHS and Maternal and Child Health Bureau Web sites. Data documentation and additional details on the methodology[7] are available from the NCHS: www.cdc.gov/nchs/slaits.htm

Interactive data queries are possible through the Data Resource Center on Child and Adolescent Health (DRC) for the NSCH: www.nschdata.org

The DRC provides immediate access to the survey data, as well as resources and assistance for interpreting and reporting findings.

Endnotes

1 *Office of the Surgeon General. The Surgeon General's call to action to prevent and decrease overweight and obesity. Washington, DC: U.S. Department of Health and Human Services; 2001.*

2 *Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition and Physical Activity. Overweight and obesity: economic consequences. Atlanta, GA: The Centers; 2005 Apr.*

3 *Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition and Physical Activity. Overweight and obesity: contributing factors. Atlanta, GA: The Centers; 2005 Apr.*

4 *Sallis JF, Patrick K, Long BL. Overview of the international consensus conference on physical activity guidelines for adolescents. Pediatric Exercise Science 6, 299-301, 1994.*

5 *Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Nutrition and Physical Activity. BMI for children and teens. Available from: http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-for-age.htm. Updated 8 June, 2005.*

6 *Zell ER, Ezzati-Rice TM, Battaglia MP, Wright RA. National immunization survey: The methodology of a vaccination surveillance system. Public Health Reports 115:65-77. 2000.*

7 *Blumberg SJ, Olson L, Frankel M, et al. Design and Operation of the National Survey of Children's Health, 2003. National Center for Health Statistics. Vital Health Stat 1(43). 2005.*